of the vocal sounds from the nasal cavity during speech. There was no bleeding of consequence during this operation; but ice-water spray was occasionally thrown on the parts. The reaction on the second day soon abated after the application of leeches. During a few days there was some pain and swelling about the left antrum, and a purulent discharge from the nostril on that side: creasote-water spray gave relief to the pain, and thoroughly cleansed the nares.

ART. XI.—*Dislocation of Right Femur, complicated with Fracture of Neck of Bone; successfully treated by Manipulation.* By J. TUNNECLIFF, Jr., M. D., Jackson, Michigan.

DECEMBER 24th, 1866, Edward Humes, farmer, aged about 30, in good physical health, was employed in felling trees in a low woodland partially covered with water. A black ash tree, nine inches in diameter at the base, had been lodged, it was supposed, firmly against another tree. A short time subsequently, while standing on the ice engaged in felling a tree in the immediate vicinity, the one which had been lodged fell, and struck Humes on the left shoulder, crushing him to the earth, and driving his feet through the ice. As he fell his body inclined to the right, and the right trochanter major struck with great force on the solid ice. He was unable to rise. The black ash tree about six inches in diameter where it crossed his body, was moved by his fellow workmen, and he was lifted from the position and carried to his house. Drs. Woodworth and Lord, of Leslie Village, who were called to him, found dislocation of the right femur into the ischiatic notch with fracture. The exact point and line of fracture they could not determine. The limb was shortened one and a half inch. The right knee was inclined to take position toward its fellow, and above it. The right foot was inverted, and pointed to the ankle of the left foot. The limb, when grasped by the surgeon, was found to be quite movable. Rotation, abduction, adduction, or even extension, could be readily made, and with but little pain. Crepitus was distinctly felt during these movements in certain positions of the limb. Luxation was evident, for the head of the bone could be distinctly felt in the ischiatic notch, and yet by extension the foot could, with facility, be brought down to the side of its fellow, and when the force was withdrawn it readily took the position first described. The right trochanter was about one and one-half inch above the level of the left, and when the limb was rotated while in a quiescent state, the head of the bone could be distinctly felt rotating in unison with it.

Here was a dilemma in which I apprehend few surgeons have been placed, and I have not been able to find an account of a parallel case. Here was a luxated bone to be replaced, and a fracture to be united; and as the former was utterly impracticable until the latter was accomplished, Drs. W. and L. wisely, as I think, decided to apply the long splint, and dress the limb in the position most favourable for a reunion of the fractured portions, and leaving the dislocation for future disposal.

January 24th, one month after the injury, Dr. W. called at my office, and requested me to see Humes the next day with Dr. Leslie and himself. I found the patient comfortable, without pain or evidence of local inflammation, and his most earnestly expressed wish was, that we should "let him alone, as he felt very comfortable, and thought he was doing first-rate." Upon removal of the dressings I found the same shortening and oblique position of the limb as described above. The head of the bone was plainly felt in the ischiatic notch, and accompanied the body of the bone when rotated. I must confess that I had at first some doubt about the alleged fracture, but Drs. W. and L. both assured me most earnestly that they could not be mistaken on that point, as both had felt distinct crepitation on their first visit, and then the great mobility of the limb at that time would seem to confirm that view. I observed further that pressure upon the neck of the bone at the base of the great trochanter, elicited evidence of tenderness at that point, and I felt forced to acquiesce in the views of the attending physicians. The question now presented to us was: Is such a dislocation complicated with fracture of the neck of the femur susceptible of reduction? If so, when and by what means can it be accomplished? Is it probable that sufficient ossification has taken place here to justify the use of pulleys, or any other means of extrusion, in returning a femur four weeks out of its socket? Ossification is much more rapid and efficient in some subjects than others, as is well known. If left too long unreduced, local adhesions in its new position would most likely render futile any efforts to reduce it; and if physical force was applied too early, we should most certainly break up the imperfect union of the fragments from recent ossification, and utterly fail to return the head of the bone to its socket. In view of all these facts I advised that the dressings be replaced, and two weeks farther time be given to the process of ossific union.

In the mean time my mind was seriously exercised as to what course it were best to pursue in the case. If we secured efficient union, it is true we might reduce the dislocation of the head of the bone with the aid of pulleys; but if in using them the recent union of the fragments was broken, we should be in a bad predicament.

I was summoned to the patient a second time on February 2d, thirty-eight days after the accident, and found him in excellent condition. He had had no fever or any evidence of local inflammation. The ossific union at the line of fracture appeared firm. The limb seemed firmly fixed in the oblique position first described. Careful measurement showed it one and one half inch shorter than its fellow. We placed him on the left side on a lounge, passed a counter-extending band from the perineum to a staple in the floor behind him, set up pulleys to be used if necessary, secured full anæsthesia with a mixture of chloroform and ether, and then proceeded as follows: I grasped the leg with my right hand near the ankle, placing the left over the head of the bone in the ischiatic notch; flexed, extended, abducted, adducted, and rotated the bone, until I was convinced that any and all recent attachments existing between the head of the femur and surrounding tissues in its new position were destroyed. Dr. W. then took charge of the limb and followed my directions in its movements, while I took in charge the head of the femur. The leg was first flexed to a right angle with the thigh, a semicircular upward movement was then made with the limb over the opposite limb to a little above the umbilicus. The right leg was then abducted with the result of course of rotation of the femur inward and the head of the femur outward. When this last motion was made I distinctly felt the head of the bone leave the ischiatic notch, pass downward and forward to the rim of the acetabulum. I followed it with my hands, pressing it in the direction it should take. Dr. W. then abducted the thigh with considerable firmness, but without expending great force, and brought the limb down to an extended position. I felt the head move as the limb was brought down, and thought it had passed into the socket; as I removed the pressure of my hands, however, it glided back into the ischiatic notch. It had evidently *nearly* passed the summit of the rim of the acetabulum. We all felt greatly encouraged. The movement was renewed exactly as before described, with perhaps a little more energy and decision than at the first, particularly on my own part, for I now pressed against the great trochanter with both thumbs, and with nearly all the force I could summon; and as the limb was passing downward to the extended position, the head of the bone returned to its socket with a snap so audible, that the other surgeons were aware of its return as soon as myself.

I felt confident that we had succeeded admirably in the reduction; but I was much disturbed by a peculiar grinding sensation, mingled with distinct crepitus, as the head of the bone crossed the rim of the acetabulum. I feared that we had broken the recent adhesions at the point of fracture. This, upon examination, proved to be the fact. The limb now lay in its normal position, apparently of the same length with the opposite limb. But close measurement showed it to be one-half inch shorter. Abduction and adduction could be made readily, but rotation, when slight extension was made, disclosed distinct crepitus. We had accomplished the reduction, and we now had to treat a fracture of the neck of the femur. We dressed the limb with the long outside splint, extending from below the foot nearly to the axilla. A foot-piece was attached, provided with slits for the attachment of the extending band. Ample cushioning was applied, and counter-extension made from the perineum. We left him quite happy that his limb looked and felt so well; and as to ourselves we were equally so, in view of the fact that our efforts had in the main been crowned with success.

Five weeks from the above date Dr. W. informs me he removed all dressings, and our patient could walk with one crutch, and measurement showed but half an inch shortening of the limb. He has progressed favourably since that time.

Before closing it may be well to add my own theory as to how this peculiar form of dislocation complicated with fracture was produced. I am convinced that the force of the blow from the black ash tree dislocated the hip, and that subsequently in the fall upon the right trochanter on the solid ice, the neck of the femur was fractured near its junction with the body of the bone. I feel certain that had we attempted the reduction by the use of pulleys, we should not only have broken up the recent ossific union, but have left the head of the femur in its new position in the ischiatic notch. And there it must have remained, as it was not only doubtful if the patient would consent to any further surgical interference, but also if any surgical effort could have been of any avail. In view of these facts I leave it to my professional brethren to decide, if the question of reduction of dislocations by manipulation, as opposed to forcible extension, may not only be worthy of their most earnest consideration, but even of the first trial in all cases of luxations of important joints.

In conclusion, we must add that we fully indorse the remarks of Prof. Gross as to the great obligations under which the profession are to Dr. W. W. Reid, of Rochester, New York, for having first clearly shown, by a series of admirably conducted experiments, dissections, and clinical observations, that dislocations of the hip-joint may be safely, certainly, and expeditiously reduced by manipulation alone, without any extraneous aid.

ART. XII.—*Description of a Specimen of Internal Ossific Deposit in a Case of Osteo-Myelitis after Amputation.* By JOHN H. PACKARD, M. D., one of the Surgeons to the Episcopal Hospital, Philadelphia. (With two wood-cuts.)

IN the Museum of the College of Physicians of Philadelphia there is a specimen, presented by me in 1866, which illustrates a feature of osteomyelitis not hitherto spoken of by writers. Hence, although the clinical history of the case is very meagre, I think the bone itself worthy of a detailed description.

It is a portion of the femur, removed by a second amputation from a patient whose thigh had been taken off below the middle a number of months before, at a military hospital. The stump of the bone became affected with osteo-myelitis, and was much enlarged in circumference, a tubular sequestrum protruding through an opening in the soft parts. Such was the local condition when, in the fall of 1865, he entered the Episcopal Hospital during my term of service. On the 21st of November I operated, making anterior and posterior flaps, and removing three inches of the cloaca.

On sawing through the femur, the portion taken away was found to consist of three concentric layers: the cloaca, three inches long; the sequestrum, three and a half inches, and within the latter a very delicate and vascular tube of new bone.

On examining the section of the pelvic portion of the femur, the end of the tubular sequestrum was readily seen, and upon grasping it with forceps another four inches of dead bone, forming an incomplete and very irregular cylinder, was drawn out. It was entirely by itself, containing no central ossific deposit.

The state of things now described will perhaps be better understood by reference to the annexed diagrams. Fig. 1 represents a longitudinal section; *a b* is the line of division by the saw; 3, the sequestrum; and 4, the